

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A refraction measuring instrument comprising:
measuring means that has a light source for emitting a measurement light beam to an eye to be examined and performs objective measurement on refraction of the eye to be examined based on reflection light of the measurement light beam emitted from the light source, which is reflected on the eye to be examined; and

an optical system, to which the light source and the measuring means are added, for simultaneously guiding the measurement light beam emitted from the light source and visible light incident thereon from an outside to the eye to be examined,

wherein the optical system comprises a free-form-surface prism having a surface for combining the optical axis of the measurement light beam with the optical axis of the visible light by reflection of the measurement light beam and transmission of the visible light,

wherein the light source emits the measurement light beam to be incident on the optical system from the direction different from that of the visible light,

wherein the free-form-surface prism reflects the incident measurement light beam inside itself, so that the measurement light beam is incident on the eye to be examined, and reflects the reflection light from the eye to be examined inside itself to the direction different from that of the visible light, in order to output the reflection light to the measurement means, and

wherein the measuring means measures the refraction of the eye to be examined while a subject is visually recognizing the outside through the visible light based on the reflection light

of the measurement light beam which is guided to the eye to be examined through the optical system and reflected on the eye to be examined.

Claim 27 (Currently Amended): The refraction measuring instrument according to Claim 1 ~~Claim 22~~ wherein the measuring means comprises:

mark projecting means for projecting the measurement light beam from the light source as a mark of a predetermined pattern to the eye to be examined;

imaging means for imaging the mark projected as the predetermined pattern by the mark projecting means; and

calculating means for calculating the refraction of the eye to be examined based on a shape of the mark imaged by the imaging means.

Claim 37 (Currently Amended): The refraction measuring instrument according to Claim 1 ~~Claim 32~~ wherein the measuring means comprises:

mark projecting means for projecting the measurement light beam from the light source as a mark of a predetermined pattern to the eye to be examined;

imaging means for imaging the mark projected as the predetermined pattern by the mark projecting means; and

calculating means for calculating the refraction of the eye to be examined based on a shape of the mark imaged by the imaging means.

Claim 42 (Currently Amended): The refraction measuring instrument according to Claim 1 ~~Claim 22~~ further comprising a wearing section for enabling the measuring means and the optical system to be worn on a head of the subject.

Claim 48 (Currently Amended): The refraction measuring instrument according to Claim 1 ~~Claim 43~~ wherein the measuring means comprises:

mark projecting means for projecting the measurement light beam from the light source as a mark of a predetermined pattern to the eye to be examined;
imaging means for imaging the mark projected as the predetermined pattern by the mark projecting means; and

calculating means for calculating the refraction of the eye to be examined based on a shape of the mark imaged by the imaging means.